

Message

From: LEE, LILY [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D6085A744F9347E6836C54C0E85B97B2-LLEE06]
Sent: 4/1/2017 4:24:40 PM
To: David Kappelman (Kappelman.David@epa.gov) [Kappelman.David@epa.gov]; Nguyen, Lyndsey [Nguyen.Lyndsey@epa.gov]
CC: Anita Singh [asingh428@gmail.com]; Bacey, Juanita@DTSC [Juanita.Bacey@dtsc.ca.gov]
Subject: FW: North Pier excerpts of resampling in K-40 anomaly areas
Attachments: North Pier Resampling K-40 anomalies 2012 Tetra Tech internal investigation.pdf; North Pier Fnl FSS Results_text only.pdf

Dear Dave and Lyndsey,

Anita will use her methods to analyze Survey Units 8, 10, and 11 at the North Pier. After she's done with that, could you please compare it to the results found from resampling? I have attached the North Pier Excerpts from the full Tetra Tech resampling description. In addition, In case you need it for context, I have just sent you a share invitation to the full 217 MB file. In addition, below is a link to the same document.

https://usepa-my.sharepoint.com/personal/lee_lily_epa_gov/Documents/Share%20Hunters%20Point%20Radiation/Investigation%20of%20Anomalous%20Soil%20Samples%20at%20HPNS.pdf

Dear Nina, Can you help in case they need more information about the North Pier?

This 2014 report doesn't have all the data. Those are in the FSSR. Nina from DTSC sent me information about that. While I'm gone, you can ask her for more information/context. She can contact CDPH for you if that helps for context.

In addition, here is a link to the review that CDPH did of the FSSR for the North Pier:

http://www.envirostor.dtsc.ca.gov/public/final_documents2.asp?global_id=38440003&doc_id=60383376

I have attached a 2 MB file giving the text only for the FSS for the North Pier. (thanks Nina!) I will separately send you access to the 24 MB version with appendices through Appendix D through One Drive that is the largest version that Nina could send me. Here is a link to this file.

https://usepa-my.sharepoint.com/personal/lee_lily_epa_gov/Documents/Share%20Hunters%20Point%20Radiation

If you need more, then Nina (Juanita) Bacey has the full electronic version. I am cc'ing her.

In addition, Pat from the Navy stated that the K-S test found all the North Pier anomalies except the Cs-137 on June 4. They are putting it into a format that is easier to understand. They will send that to us soon. Could you please review that in my absence? Feel free to give comments directly to the Navy informally in my absence through phone or email with the appropriate caveats if your communication is internal, pre-decisional, and deliberative. But we'd have to wait for John to return to review and approve if we want to give formal comments.

I appreciate your help!!

From: LEE, LILY
Sent: Thursday, March 30, 2017 12:28 PM
To: David Kappelman (Kappelman.David@epa.gov) <Kappelman.David@epa.gov>; 'Anita Singh' <asingh428@gmail.com>
Subject: North Pier excerpts of resampling in K-40 anomaly areas

The Navy found locations where K-40 concentrations were anomalous. In 2012, Tetra Tech resampled areas in the North Pier, under direct Navy oversight. Below is a summary of what they found. Attached are relevant excerpts from the full document. If you want, I can also excerpt the details.

This might help us select any more areas on North Pier where more analysis could be helpful

October 24 through November 28, 2012

Additional Systematic Sampling

From October 24 through November 28, the HPNS team took action to collect systematic samples in these areas to determine if the radionuclide signature of low K-40, Ra-226, and progeny could be replicated. An additional surveillance was conducted by Greg Joyce on October 24, 2012, for B517 SU-002. The surveillance report is contained in Attachment 8. A listing of survey units that warranted further investigation is provided as Table 2. Soil sample survey maps for the former Building 517 Site, Building 707 Triangle Area (707 Area), Shack 79/80, and North Pier are included in Attachment 3.

TABLE 2
SURVEY UNITS RECOMMENDED FOR RESAMPLING

| Area | Survey Unit | Sample Numbers | Date Collected | COC Radiological Technician |
|------------|-------------|----------------|----------------|-----------------------------|
| 517 | 2 | 123-158 | 10-Apr-12 | Jeff Rolfe |
| 707 | 9 | 59-78 | 08-Jun-11 | Jeff Rolfe |
| 707 | 16 | 67-86 | 07-Jun-11 | Jeff Rolfe |
| 707 | 17 | 64-83 | 08-Jun-11 | Jeff Rolfe |
| 707 | 22 | 81-100 | 12-Aug-12 | Anthony Smith |
| 707 | 23 | 5-24 | 31-Jul-12 | Jeff Rolfe |
| North Pier | 1 | 28-47 | 31-May-12 | Ray Roberson |
| North Pier | 7 | 30-49 | 04-Jun-12 | Justin Hubbard |
| North Pier | 8 | 32-51 | 31-May-12 | Ray Roberson |
| North Pier | 10 | 27-46 | 31-May-12 | Ray Roberson |
| North Pier | 11 | 27-46 | 31-May-12 | Ray Roberson |
| 79/80 | 2 | 3, 5-6, 8-22 | 04-Apr-12 | Jeff Rolfe |

Examination of North Pier

The North Pier had been covered by crushed asphalt at the conclusion of remediation several months earlier; however, it was evident where samples had been collected as part of the investigative process. A test pit was dug to a depth of 3 feet bgs. The soil beneath the asphalt was a mixture of rocks, gravel, and clays, and was not consistent throughout the area. Results from the test pit on the North Pier are shown in the following Table 4, and sampling locations are shown on Figure 3. Photographs are provided in Attachment 10. No results at any depth were comparable to the anomalous soil samples with low concentrations of K-40, Ra-226, and progeny.

TABLE 4

NORTH PIER TEST PIT SAMPLES COLLECTED TO A DEPTH OF 3 FEET

| Sample ID | K-40 (pCi/g) | Ra-226 (pCi/g) | Cs-137 (pCi/g) | Bi-214 (pCi/g) | Pb-214 (pCi/g) |
|--------------|--------------|----------------|----------------|----------------|----------------|
| 07A-SB04-002 | 13.73 | 0.5723 | 0 | 0.5101 | 0.4946 |
| 02ANPR-1100 | 6.796 | 0.3756 | -0.01209 | 0.0923 | 0.2235 |
| 02ANPR-1101 | 9.391 | 0.3323 | -0.008652 | 0.2755 | 0.4686 |
| 02ANPR-1102 | 9.294 | 0.4989 | -0.006876 | 0.4131 | 0.3777 |
| 02ANPR-1103 | 6.227 | 0.3655 | -0.0004954 | 0.09775 | 0.1739 |
| 02ANPR-1104 | 8.076 | 0.3324 | 0 | 0.3696 | 0.2369 |
| 02ANPR-1105 | 8.011 | 0.1466 | 0 | 0.3387 | 0.3623 |
| 02ANPR-1106 | 10.64 | 0.5653 | -0.006999 | 0.3513 | 0.4925 |
| 02ANPR-1107 | 10.51 | 0.4341 | 0.007666 | 0.3817 | 0.5214 |
| 02ANPR-1108 | 17.77 | 1.359 | 0.01339 | 0.4399 | 0.5899 |
| 02ANPR-1109 | 6.758 | -0.1163 | -0.004885 | 0.1066 | 0.2448 |
| 02ANPR-1110 | 7.906 | 0.4756 | 0.004713 | 0.143 | 0.2897 |
| 02ANPR-1111 | 7.847 | 0.5883 | 0.001557 | 0.3008 | 0.3195 |